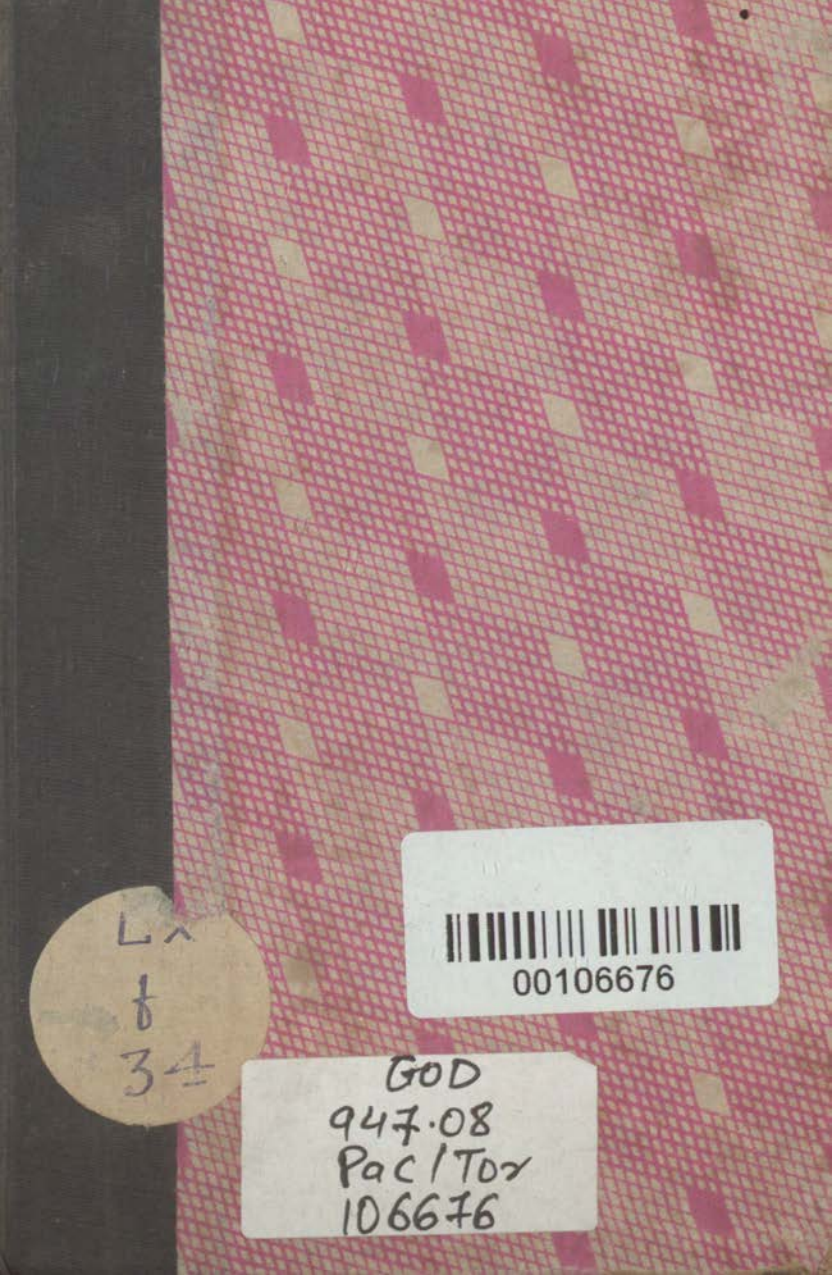
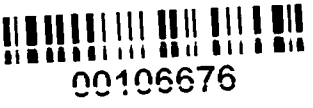

00106676
GOD
947.08
PaC/Tor
106676



Digitized with financial assistance from
Shri Brihad Bhartiya Samaj
on 31 October, 2019

THE TORPEDO SCARE

Lx-634

THE TORPEDO SCARE

EXPERIENCES
DURING THE TURCO-RUSSIAN WAR

106676 or

BY

HOBART PACHA

Reprinted from 'Blackwood's Magazine,' with Additional Matter

GOD
·947.08
Pac/Tor
106676

WILLIAM BLACKWOOD AND SONS
EDINBURGH AND LONDON
MDCCCLXXXV

PREFACE.

IF I presume to endeavour to stem the tide of public opinion as regards the very great efficacy of the fish-torpedo as a weapon of maritime warfare, it is not with any confidence in my powers of persuasion, or for the pleasure of controversy, but because I am perhaps the only person living who has commanded squadrons or single ships in war, where torpedoes were used as *offensive* weapons.

HOBART PACHA.

June 1885.

THE TORPEDO SCARE.

DURING the late Turco-Russian war, Russian torpedo-boats constantly attacked Turkish ships. These attacks were made not only by boats armed with the Pole and Harvey torpedo, but with the newest type of the Whitehead torpedo then invented. They were commanded by as active and gallant a set of men as ever stepped a ship's deck, and who made every possible effort to destroy Turkish ironclads, every one of which returned safely to Constantinople after the war. The only loss to the Turkish squadron was two small wooden gunboats blown up *in the Danube* through the carelessness of their commanders.

I venture to maintain that the power of the torpedo, as a weapon of offence as well as of defence, is enormously exaggerated. Were it not so, one might almost say that naval warfare would soon come to an end altogether, inasmuch as no fleet or ship could resist such a deadly weapon. Blockade of an enemy's port could not be maintained. Vessels could never lie at anchor near an enemy's coast. Fleets could not cruise in the neighbourhood of hostile ships carrying torpedo-boats. Ports defended by torpedoes could not be attacked, harbours and estuaries could not be approached; and, in fact, none of the old systems of naval warfare could be put into execution. The courage of naval officers, their coolness in time of action, their seamanlike qualities, of which some nations are so justly proud, would be put to a test in a manner altogether different from what has hitherto taken place. The sailor, although brave and cool in a fair fight, would be in constant dread of being hurled into the

air without even the chance of striking a blow or firing a shot in self-defence. The writer of this, while commanding squadrons manned by men who have not only the unsurpassed courage of their race, but who have recourse when in danger to the almighty word *kismet*, and only think of danger *after* its arrival — had only his own humble idea of courage without *kismet*, and thus felt all the anxiety day and night, for nearly a year, of not knowing at what moment he might receive the happy despatch by being blown into the air.

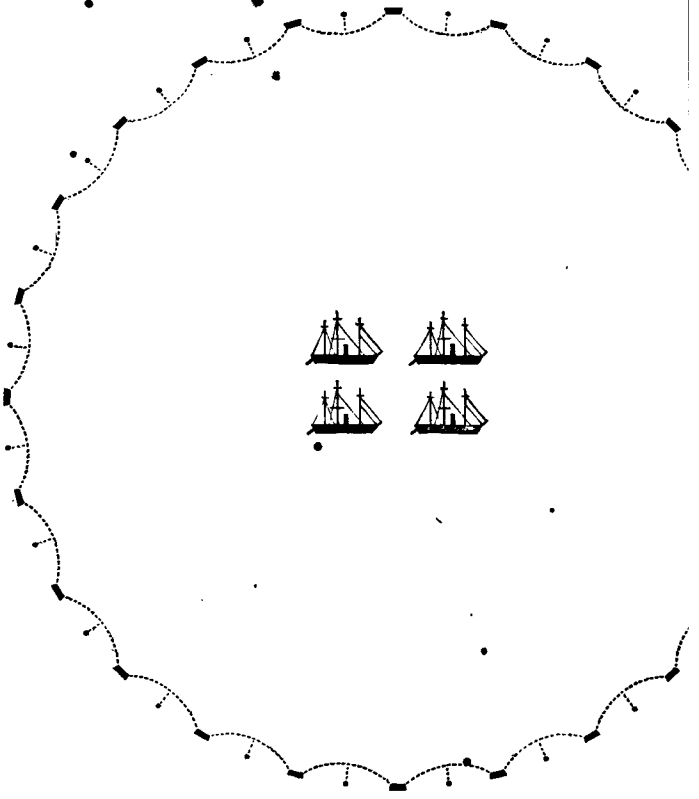
The Russians had, very shortly after I had anchored my squadron in Batoum, launched several torpedoes at the ships, in spite of my having placed guard-boats across the entrance of the harbour. One of these torpedoes struck the chain of the flag-ship, and went on shore unexploded; another struck on the armoured belt of a corvette and exploded, but the blow being at an angle, it did no material injury. After this experience, it was absolutely incumbent on

me to take some steps for the safety of the vessels under my command. The means in my power for torpedo defence were unfortunately very limited, but that very fact enabled me to prove that necessity is the mother of invention. For example, the system which I had seen adopted with regard to hostile fleets in torpedo defence, comprised a system of *éclairage* which it was entirely out of my power to employ. Thus, instead of lighting my ships, whereby I should have become a target for the enemy, I, from force of circumstances, was obliged to maintain what was in reality the far better system of utter darkness from sunset to daylight. But of this hereafter.

I will now relate in detail the plan I applied as a defence in regard to the different points mentioned above—namely, the course to be adopted for the safety of ships of war while blockading an enemy's port, while lying at anchor near an enemy's coast, or while cruising in the neighbourhood of hostile ships blockading.

PLAN No. 1.

The wire-rope between the boats is sunk sufficiently to catch th the torpedo-boat, and buoyed half-way between the boats to prevei ing more than necessary.



N.B.—The 4 vessels are 120 yards long. The two pairs, breadthw yards apart. There are 24 boats, each 8 to 9 yards long; and the betyeen the boats are 54 yards each. The radius of the circle de the boats is 550 yards, which keeps them 400 yards from the ships.

I think that the ships should be always, when convenient, under way, and with their torpedo-nets out, constantly changing their positions so as not to be easily found by the enemy's torpedo-boats: no lights whatever should be shown. Should it be necessary to anchor, I think that the ships should be anchored in small detachments, and a system of defence arranged as follows, placed round each ship or detachment. (See Plan No. 1.)

By this it will be seen that boats at a distance of 400 or 500 yards will be placed round the squadron at anchor. These boats will be connected together by wire ropes immersed about two feet in the water, and buoyed in the centre. The object of this is to catch the screw of any attacking torpedo-boat. It has been proved that common rope, used for want of anything better, has effectually checked the career and capsized an attacking torpedo-boat in her attempt to destroy a Turkish ship in the Black Sea during the last war; and I know that most satisfactory

experiments with the wire rope have been made elsewhere. The result of these experiments was, that a torpedo-boat, steaming 19 miles an hour, has capsized while dashing full-speed on to an imaginary enemy's ship.

It seems to me that this system, carefully applied, would prove a most efficient and thorough defence against torpedo attack. I am aware that the present torpedoes are fitted with screws so sharply edged that they would cut through any *rope* placed to stop them. With the wire rope this would be impossible. This system of defence would apply to single ships at anchor in the same way as it would apply to a squadron or to a detachment, and I see no reason why a larger number of ships than I have shown on the plan should not be protected in a similar way — the only question being, that the radius would have to be increased according to the number of ships, which might prove, if overdone, inconvenient, if not impossible. Objections might be made that in

bad weather boats could not keep their positions. I have had ample proof that in bad weather torpedo-boats cannot fire with any accuracy. It therefore tells both ways.

Now as to lying at anchor near an enemy's coast. In this also I have had considerable experience while at Batoum and its neighbourhood, where I had frequently under my command twelve or fourteen ships, against which the Russians constantly organised torpedo attacks. All their attacks were unsuccessful, for the following reasons: in the first place, as a most gallant Russian officer informed me after the war, it was very difficult to find Batoum at all. I will diverge for a moment from my point in order to state that an English naval officer of the highest rank and position informed me that he had tried defence in torpedo warfare, he himself being on board the defending ship, and that he found that the torpedo-boats so easily discovered his vessel in the darkest nights, that, had it been real warfare, she would have been sunk or destroyed.

Now if a man tries to find a thing in the dark in his own bedroom, he can easily find it; but if he goes into another man's bedroom, it will puzzle him vastly to put his hand upon what he wants. I make this comparison because I imagine that the attacking torpedo-boats referred to by this gallant officer came from the immediate neighbourhood, and knew pretty well where the object of their attack was lying—knew the bearings and distance before they started to attack her, and thus had very little difficulty in finding their way. The attacks by the Russian ships on the Turkish squadrons were generally made from vessels coming from ports 200 to 300 miles off, and which, on a pitch-dark night, had to find a harbour where there were no marks or lights of any description. Nothing could be seen beyond the dark outline of the high mountains behind the harbour, which were next to useless as a guide to the anchorage. Moreover, we had a plan of defence at Batoum of a most original nature, proving again that

necessity is the mother of invention. (See Plan No. 2.)

PLAN No. 2.—HARBOUR OF BATOUM.

A, Spars anchored and planks nailed on 12 feet deep, for a length of 300 yards; B, Guard-boats (shallow water); C, Torpedo found unexploded; D, Torpedo found exploded; E, Fort; F, Ships lashed to shore.

The little port of Batoum and its town were kept, as I have stated, in perfect darkness. The

severest penalties were to be incurred by those who showed a light anywhere, and on several occasions infractions of that rule were punished with great severity. On one occasion we caught an old rascal showing a light from the window of a house prominently placed near the sea. The man was instantly seized and bastinadoed. After this, and when one or two other examples had been made, one might have imagined Batoum a city of the dead during the night. The shape of the harbour is shown by the plan. From the spit of land marked A we improvised a breakwater, consisting of such trees and spars as we could lay our hands on. These trees and spars were anchored in a line verging towards the beach at a point called B. To these trees we nailed numbers of thin planks abreast straight down into the water—so making, as it were, a wall of planks about 12 feet deep. The proof of their efficacy was shown one morning by our finding a hole in the planks, and a torpedo diverged from its course lying on the beach at

the point marked C. This torpedo had not exploded, and, when discovered by the guard-boats, was surrounded by gaping inhabitants who, in their astonishment, looked upon this unusual apparition as if it were a huge fish still alive and moving his tail — that tail being, in fact, the screw, which was still in motion. This proved that, as we had anticipated, the direction of the torpedo had been changed on coming into contact with the planks; and instead of going among the ships at anchor, as was intended, it had gone ashore. I think this experience exceedingly interesting, as it shows that very little will turn the direction of a fish-torpedo.

On several other occasions attacks were made by torpedo-boats on the ships in the port of Batoum, without any result beyond a loss to the Russians of three or four torpedoes, which were landed on different parts of the beach, near to which the Turkish men-of-war were lying at anchor. Some of these torpedoes were in such a state of perfection, that Mr Whitehead

the inventor, knowing that we had by their capture become the possessor of his secret, made a special contract with the Turkish Government, whereby he was bound to give twenty-five torpedoes at cost price, and wherein it was agreed that the Ottoman Admiralty were to pay nothing for the secret (for which other Governments were paying from £12,000 to £15,000) so long as they kept it.

I shall now mention a curious incident which happened to a Turkish squadron lying at anchor and protected by guard-boats, placed somewhat in the manner I have already described. I wish my readers always to remember that the appliances against torpedoes in the Turkish fleet were of the simplest possible description. The squadron consisted of five vessels, which had been in the habit of cruising every night to avoid torpedo attack. On this occasion they had, in consequence of the bad weather, returned to their anchorage. A Russian vessel, carrying five torpedo-boats in tow, started from

Odessa to hunt for the Turkish squadron, who were supposed to be cruising off Serpent Island, about eighty miles from Odessa. The Muscovites were unable to find their enemy, and I don't wonder at it, for the Ottoman ships, even had they been cruising off that night, used smokeless coal, sailing in open order for safety against collisions, and without showing any lights. The Russian vessel with the torpedo-boats being disappointed in finding what she wanted at sea, proceeded to the usual place of anchorage of the Turkish squadron off Soulina mouth. Finding the weather bad, the commander thought that it was best not to attack; but it appears that one of the torpedo-boats, in disobedience of orders, made a dash at the Turkish squadron. This particular boat was armed with the Pole torpedo. The officer in command made a gallant charge at the first Turkish vessel he could discern through the darkness. As he approached her, he found that *something* all of a sudden stopped his way; and he saw several black objects approaching

him. Nothing daunted, he struggled to get alongside the vessel under her bows. Finding that he could not succeed in getting quite close, he, in despair, discharged his torpedo, but without doing any harm whatever to the Turkish ship at which he directed it. Scarcely had he done so when (as he described his own sensations afterwards) he found himself in the water without knowing by what process he had got there, or how in the world it had all happened, —the real facts being that the black objects he saw were the guard-boats, which were being drawn closer and closer to him by the ropes that connected them together, which ropes fouling his screw had been the cause of the disaster. His boat was capsized and went to the bottom, whither he would have gone too if he had not been fished out by the crew of one of the Turkish guard-boats and taken prisoner. The greater part of his crew were drowned. The name of this daring young officer was Putskin; and his cool courage was very amusing, for when brought

before the commanding officer of the Turkish squadron in a half-drowned condition, he could only exclaim, in excellent English, "Why the devil didn't I blow up that ship!"

He was asked if he had any idea as to what stopped him, and it was suggested to him that a rope between the guard-boats might have fouled his screw.

"Something of that sort must have happened," he answered. "But why the devil didn't I blow up that ship!"

The poor fellow seemed to have no thought regarding the sad plight he was in: he only grieved for not having succeeded in carrying out his object.

He explained to me that the other torpedo-boats which started with him were all armed with the Whitehead torpedo, but that *it was impossible to use it in bad weather.* The Pole torpedo might have done the deed he was so anxious to perform, and with it he might have succeeded in "blowing up that ship." He was too

plucky a fellow to be allowed to go back to the enemy, so we kept him a prisoner till the conclusion of the war; and I only hope that, for its own sake, the Russian Admiralty did not lose sight of such a dashing and determined officer.

While writing on incidents of the war, I will mention another interesting occurrence. A Turkish ironclad was lying off Soukoum Kali. That place being an open roadstead, she was very much exposed, and an excellent object for torpedo attack. A fast Russian cruiser was always hovering about, but the cordon of guard-boats connected by ropes prevented her torpedo-boat from making any attempt. This torpedo-boat was armed with a Harvey torpedo. One night there was to have been an eclipse of the moon. Now there is a superstition among Orientals regarding an eclipse, which caused the look-out to be somewhat relaxed, and the guard-boats to be withdrawn, and nearer the man-of-war than they should have been—in fact, I fear

they had gone quite alongside, thinking more of the mysterious eclipse than of their active enemy.

As the eclipse only lasted for about a couple of hours, the steamer carrying the torpedo-boat must have been near in the offing, and should have been seen; although I found, on inquiry, that the system of no lights and no smoke was carried out in the strictest sense by the Russian torpedo-carrying vessel. However this may be, half an hour after the moon was eclipsed the attack was made by a boat carrying a Harvey torpedo. This boat succeeded in getting so near that she was able to make the circuit necessary for firing her torpedo, and, though attacked by the guard-boats, fired it within ten feet of the Turkish ship. A great explosion and much smoke was the result. The lookers-on on shore telegraphed to Sebastopol that they saw the vessel sink. However, so far from that being the case, I found, on visiting her two or three days afterwards, that, except for a slight mark

on her side close to the water's edge, no damage was done. On the vessel's return to Constantinople she was put into dock, when it was found that she had been very slightly damaged; in fact it was not necessary to change any of her outside plates.

I think that the manœuvres necessary to make the Harvey torpedo efficacious render it a weapon on which little or no reliance can be placed, unless all the hands on board the attacked ship are asleep. I would rather trust to the Pole than to the Harvey torpedo, though I do not think that either of them counts for much when a sharp look-out is kept. In my opinion the most useful torpedo is a fixed one, fired either by contact or by electric batteries at a distance, especially when they are used in defence of the approaches to forts, the entrances of harbours, of estuaries, &c. According to general opinion, the perfected Whitehead or Swartzkoff torpedo is the only weapon for active service at sea. Let us ex-

amine how they can best be utilised. My opinion is that for attack they are of very doubtful efficacy. I remember on one occasion I followed in a very fast frigate (my flag-ship) the Emperor of Russia's yacht Livadia too near to the fire of the forts of Sebastopol. I say too near, because I drew on my ship such a fire, that, had I not "cleared pretty quickly out of that," I should not have been here to-day to tell the story. Since the war, a Russian naval officer, whose name was Captain Makaroff, A.D.C. to H.M. the Emperor of Russia, told me that he had under his command seven torpedo-boats, with which he volunteered to go out—in the day-time it must be remembered—and attack me. We discussed at some length the probable result, and I think that even he admitted that he could have done nothing. Here is my view and argument. I said to him, "When I saw you and your torpedo-boats coming out, I should have run away. Now I could go thirteen or fourteen knots. You could steam about nine-

teen. Thus your speed following me would have been about five knots—no great speed at which to approach a vessel armed to the teeth with Nordenfeldt guns—guns *en barbette* firing grape, shrapnel, &c. I am convinced that we should have destroyed all the torpedo boats; and this, I believe, would be the fate of any day-attack attempted by them."

"Well, then," said my friend, "I should have followed and attacked you during the night."

"There again," I said, "I think that you would have failed, because if you had been in range of my small guns as well as of shell, say at about 3000 yards, before dark I should have destroyed you. After dark I should have changed my course, and how would you have found me? However, supposing that I had stopped in the night and put down my defences, what could you have done? I don't think that a ship can be seen so as to be fired at a distance of more than 400 yards on a dark night, and a moving ship would be a still more difficult

mark. If a torpedo-boat came nearer than 400 yards, she would have been caught by the line of defence, should I have thought it prudent to stop." On this point we had a long and somewhat warm discussion, which ended—at least I flattered myself it did—in the Russian officer remarking that really he thought, after all, that he could have done nothing.

I find that naval men have, as a rule, great confidence in a system of defence against torpedoes by means of nets, and I understand that the ingenuity of the age has invented a plan enabling a ship to steam seven or eight knots without any inconvenience from this modern crinoline. For my part, I do not ignore the utility of this system for want of a better; but I hear rumours of torpedoes which will be able to attack ships at a point that cannot be protected by this plan—namely, under the bottom of the ship, where the protecting net would have no power. But the torpedo, of whatever description, is generally carried in a boat, and if

you can manage to catch or destroy the boat, there is an end of the matter.

Now with regard to the power of torpedoes for attacking purposes. I hear it said that during a naval engagement torpedoes can be utilised to a very great extent. In this I am inclined to agree. If torpedoes can accompany squadrons and act independently either against disabled ships or even against ships which might be approached unperceived, there can be no doubt that they would play an important part in a naval engagement. But the difficulty seems to be their remaining constantly at sea in company with a fleet. The French already are drilling their torpedo-boats to accompany a sea-going squadron; but I have a suspicion that, for different reasons, these boats are constantly obliged to return to port. It must be remembered that a torpedo-boat is built of the lightest material, and is of the finest workmanship. Very little would therefore tend to put her out of order. I have seen a torpedo-boat before a

gale, in a gale, and after a gale, at sea; and although I should be sorry to discourage those who have put faith in her capacity as a sea-boat, still I must say that in the last state the boat presented a very dilapidated appearance.

Although it is the fashion for ironclads to be fitted so as they can launch their own torpedoes, I do not think that they would be able to do so with efficiency, for several reasons—the first being, that a torpedo is never sure of being fired with accuracy when projected from a height greater than two or three feet above the water. In fact it has been proved that to obtain the so-called accuracy at which they profess to have arrived, the torpedo must be fixed as close as possible to the water's edge, and in the boats now in construction the most important element is the close proximity to the water in which the tubes are placed. I myself have seen torpedoes fired from a ship's broadside, and although on one or two occasions they have been launched with considerable accuracy, I have seen one

of them immediately after its submersion fly straight up in the air and endanger the safety of the ship from which it had been fired; so I think that little confidence can be placed, at present, in the efficacy of torpedoes fired from ships' batteries.

There is another essential point as regards the efficacy of sea-going torpedoes during a naval engagement. A torpedo-boat might in the *mêlée* mistake a friend for an enemy. Again, let us suppose that two ships are hotly engaged, and that one of them succeeds in capturing the other. If the conquering ship neglects to hoist on her prize the flag of her nation, a torpedo-boat coming from a distance, and belonging to the captor's nationality, is as likely as not to blow the prize up. This may be rather far-fetched, but more unlikely things have really happened in naval warfare. Coming naval engagements will be soon decided,—the time would be too short and the confusion too great to allow of any accurate action on the part of torpedo-boats. In-

dependent action would be dangerous. I should suggest that torpedo-boats of a smaller class that can be hoisted up should be carried on board men-of-war. These could be used or not as required, by responsible captains, who would be capable of forming an opinion as to the time when they should be utilised.

Now one word about offensive torpedo warfare. Torpedo-boats could be sent from blockading squadrons into an enemy's port, and if the enemy's ships were unprepared, could do, no doubt, a vast amount of injury. Further than this, I am at a loss to perceive how they can be utilised.

I have ventured in this paper to throw some doubt upon the great efficacy of the so-called fish-torpedo, inasmuch as I think its danger can be averted. I will now turn to other torpedo inventions, which I think, when perfected, will prove better adapted to naval warfare. It must be remembered that the origin of the torpedo was in America during the great war between

the North and South. The torpedo used, although at that time in its infancy, proved itself to be a most deadly weapon of defence. Placed at the mouths of great rivers, in the rivers themselves, and in shoal-water, wherever an enemy was likely to be cruising, it did good service on many occasions. I think I am right when I say that more than fifteen vessels were destroyed by torpedoes during the time that the war lasted. This torpedo was, with some very rare exceptions, used as a mine placed either floating, or at the bottom of the sea or river, and several vessels were thus destroyed while passing over these snares. More than one case of conspicuous daring on the part of the Southern naval officers occurred during the war, while using most effectively what is called the cigar torpedo-boat. This was a craft which, when in motion, was entirely immersed, except the top of the funnel, and might almost be called a submarine torpedo. I remember on one occasion during the war, when I was at Charleston, meeting in

a coffee-room at that place a young naval officer (a Southerner), with whom I got into conversation. He told me that that night he was going to sink a Northern man-of-war which was blockading the port, and invited me to see him off. I accompanied him down to his cigar-boat, as he called it, and found that she was a vessel about forty feet long, shaped like a cigar, on the bow of which was placed a torpedo. On his stepping on board with his crew of four men, his boat was immersed till nothing but a small piece of funnel was visible. He moved off into the darkness at no great speed—say at about five miles an hour. The next evening, on visiting the coffee-house, I found my friend sitting quietly smoking his pipe. He told me that he had succeeded in making a hole in the frigate which he had attacked, which vessel could, in fact, be seen lying in shallow water, some seven miles off, careened over to repair damages. But he said that, on the concussion made by firing the torpedo, the water had rushed in through

the hatches of his boat, and she had sunk to the bottom. All his men were drowned. He said that he didn't know how he had escaped himself, but he fancied that he came up through the hatches, as he found himself floating about, and swam on shore. This affair was officially reported by the American blockading squadron, corroborating the fact of the injury done to the frigate, and stating that the torpedo-boat was got up, with four dead bodies in her hold. Here is one system which might be utilised in naval warfare if perfected, and I am given to understand that a submarine torpedo-boat is already invented by Mr Nordenfeldt.

In regard to the fixed torpedoes I have already referred to, the admiral commanding the American squadron told me that on one occasion he was steaming in line, his flag-ship being second in the order of sailing, when suddenly the ship ahead of them disappeared altogether, having struck on a mine; and that he found these mines the most deadly enemies to deal

with, especially when the water was not very deep. I have seen a clever invention of Colonel Ley tried at Constantinople. This invention, which is now being put into shape by Mr Nordenfeldt, struck me as being the weapon of the future, if the present somewhat serious defects—namely, its want of speed and immersion—could be overcome. When I saw it tried, it was steered by electricity, and went very straight for more than a mile. But it was too visible in the water, and only obtained about nine knots' speed, and thus, I think, would have been easily destroyed in the daytime. However, I am given to understand that Mr Nordenfeldt has partially, if not entirely, overcome the above-named defects. If so, he has a good chance of taking a lead in torpedo-manufacture, as he does now in machine-guns. General Berdan also promises great things in torpedoes. If he can do what he professes, he will cut every one out; for he undertakes to give speed, distance, safety against nets and other obstacles, easy steering powers,

certainty of direction, &c. I wish him well, but he has been a very long time about it, and so far his trials have shown few satisfactory results.

Now in this paper I have spoken of the fish or Whitehead torpedo, the Harvey, the Pole, the fixed or mine torpedo, the Ley or Nordenfeldt, the cigar-boat, and the Berdan. I have no doubt that there are other inventions, because the fact remains that the torpedo is not perfect —no, not by any means. When it is so, we had better act like the 'coon up a tree in America, who says to the sportsman, whom he knows to be a dead shot, "Don't shoot—I'll come down;" for war would then be too awful.

As the torpedo scare may extend to merchant-vessels, I will say a few words of consolation on that head. A merchant-vessel need not fear the torpedo-cruiser, because if the vessel carrying the boats which launch that nasty weapon can get near enough for them to use it, she will be near enough to go alongside, for the

capture of valuable property is of more importance than its destruction. Moreover, it would be useless to send out torpedo-boats alone to look for prizes. Where could they be sent from? Where would they get coals? And what would they do with the prizes after they had taken them? They cannot carry prize-crews; and to destroy a vessel for the sake of destruction would be a wanton act, which would be universally condemned. Besides, a torpedo is a very expensive article to throw away for the sake of destroying an enemy's merchant-vessel. So I think that the captains and crews of merchant-vessels may breathe freely as far as torpedoes are concerned. It is intended, I understand, to use torpedoes on board regular sea-going vessels of from 300 to 400 tons. This seems to me to be a practicable idea; and should the distance a torpedo can be fired be increased, these vessels would be serviceable craft: but so long as 400 yards is the maximum distance, they would, unless attacking a craft of their own size, be

liable to be knocked to pieces before they could get within torpedo-range of the enemy; and it must be remembered that they would be a much larger target than the torpedo-boats.

One word more. I would ask my naval friends how they would judge distance at night when firing their torpedoes, and how they propose to approach ships guarded with nets and boats? Remember, also, that ships can cruise with their nets down. The fact is, that what frightens people is the great speed at which they see the devilish-looking torpedo-boat dashing by them. They do not take into consideration the damage that great speed would cause to the torpedo-boat itself, in the event of its meeting any obstacle, or being obliged to stop suddenly. For example, a curious case occurred lately on this coast. A torpedo-boat was obliged to stop suddenly, the result being that her machinery came to utter grief, and three men were killed by the fires being thrown out of the furnaces and on to them; and I repeat that a boat foul-

ing a wire-rope was capsized and sunk, through the sudden check of her great impetus through the water. Taking into consideration all the experiences that I have narrated in this paper, I think that I am justified in saying that fish-torpedo warfare is to a great extent a bugbear, and though not to be entirely despised, may be designated as the "naval scare of the day."

Since the above paper appeared in 'Blackwood's Magazine' for June 1885, I have found that the opinions expressed in it have been much criticised. For example, critics argue that, in the event of a combined attack of several torpedo-boats on a single ironclad, that vessel would find great difficulty in carrying out my system of defence. To this I answer, the same defences which would suffice to keep off one torpedo-boat would be equally efficacious against a combined attack. It is argued also, that the great speed

of the torpedo-boat would enable her to surmount all the obstacles placed in her way. This, and other objections, I think I have combated in my argument against the torpedo scare. It has been most satisfactory to me to see that those whose opinion I most value—viz., men of the highest official position, and officers of rank in the navy who are not rabid torpedists (if I may be allowed to coin a word)—have told me that while a prudent reserve prevents their saying all that they think, they agree with me to a great extent, if not altogether. Many who are of a different opinion are men trained during the last few years as torpedo experts, and they are inclined to frown severely on any one who dares to combat what I believe to be their honest opinion regarding their pet idea, which is, that in the next naval war torpedoes, and torpedoes only, will decide naval combats. In this I cannot agree; but time will show. By the way, *apropos* to time, have any of these believers in the efficacy of torpedoes ever calculated

how long a torpedo lying unemployed will last? I must not disclose secrets, but I ask them the question, well knowing that they could only answer it in a way which would support my arguments against the torpedo scare. Schwarzkopf bronze and suchlike fittings would improve the lasting power of torpedoes; but with all that, I still have doubts as to their great durability.

I will now endeavour to explain to the uninitiated the formation and action of the different sorts of torpedo at present in use. I suppose that, in accordance with the generally accepted opinion —which, however, I have ventured to disagree with—I must place first on the list the Whitehead or Schwarzkopf fish-torpedo. This is a weapon fired from a boat or fixed battery, propelled by compressed air at a speed of about twenty miles an hour, and which can be fired, with fair accuracy, about 400 yards. The boats that carry the weapon have great speed, and rush on towards the enemy till within the distance

named (about 400 yards), then launch the torpedo into and under the water in the direction of the enemy's ship. This projectile is generally some 19 feet in length, shaped like a huge cigar, divided into three compartments,—the front compartment (which ignites on contact with any obstacle, such as the side of a vessel) carrying from 100 to 150 lb. of dynamite—the centre and third compartments containing the machinery, the compressed air, and the screw propeller. In regard to this weapon, I repeat that I think that if proper care be taken, not forgetting the grey colour a ship should be painted, so as to be invisible at night—a most necessary precaution I omitted to allude to before—the intended injury to a vessel attacked can be prevented. If I commanded a fleet, I should, were it thought advisable for strategical reasons to separate the ships during the night, make every captain responsible for the safety of his own ship. If it was considered better to keep the ships more united, I would follow the plans I have proposed

in other parts of this pamphlet for their protection, which I cannot but think are ample to ensure their safety. I refer to the cordon of boats and the torpedo-nets.

The next torpedo I shall refer to is the Nordenfeldt or Ley torpedo: this is a cigar-shaped weapon of the same dimensions as the Whitehead, guided by electricity and propelled by compressed air. (I hear rumours of electric power being applied for the purpose of propelling this projectile, but I have not seen it done.) So far as present official experience goes, what is wanted here is more speed and greater immersion. It has the advantage of much greater range than the Whitehead; but the fact of the speed being only nine knots, and of so much of the projectile being visible above the water, whereby a fairish mark is made for an enemy, is considered a great impediment to successful results. I can see no reason why both these defects should not be rectified; and if this is done, the accuracy of fire and the much

greater range of the action of the torpedo would give it a decided superiority over the first-named projectile. It was curious and most interesting to see, as I had the pleasure of doing, when assisting at some experiments of the Ley or Nordenfeldt torpedo in the rapid currents of the Bosphorus, the dangerous little weapon skimming along on the top of the water, skilfully and most accurately guided by Mr Nordenfeldt's electrician, a young English naval officer of the name of Slieman. To see the way he guided the weapon through three distinctly different currents which, had it not been steered, would have carried it goodness knows where, I could no longer doubt that for currents, tide-ways, and sea-ways, at last we had arrived at *the* thing in torpedoes; but I was obliged to admit, in accordance with the general opinion, that more speed and immersion were necessary. What is going on now with regard to this promising marine projectile seems to be a mystery, but I expect that some day before long we shall hear of it again.

Before closing my remarks on what is called the fish or mobile torpedo, I will say that I think its one real chance of being made efficacious as a weapon of offence in the open sea is, that it should be used from on board regular sea-going vessels; for while it is an undeniable fact, that although such ships offer a better mark to an enemy's guns, they can, on the other hand, sustain the shock of several hits from the vessels they are engaged with—whereas the small, delicately-made torpedo-boats would be almost knocked to pieces by the wind of a heavy shot or shell: moreover, even the showers of shot from machine-guns would take a long time to destroy a craft of from 400 to 500 tons burden, while they would soon give good account of the flimsy little craft of which all the world is raving at this moment.

The next torpedo which I shall endeavour to describe is called the Harvey torpedo. Although this weapon is nearly considered obsolete, there are persons who still support it as an efficacious

weapon of offence. Now, what is this torpedo? It is a projectile that requires a great deal of manœuvring before it gets into a position to be used as an offensive weapon. For example: a vessel carrying the Harvey torpedo must be of considerable size, and must swoop down on her intended victim till within a couple of hundred yards, then turn round and tow the weapon she has launched from her sides or stern into position; then, as it seems to me, she must try to persuade, by some mysterious system, the torpedo to go alongside of the enemy and blow her up. It is a case of "Dilly, dilly, come and be killed"; and if a ship is such a goose as to let the Harvey torpedo come alongside her, she deserves all she gets. I fancy we shall not hear much more of this projectile — though, when torpedoes were in their infancy, Captain Harvey deserved the greatest credit for the zeal he showed in the cause of torpedo warfare.

Now, as an attacking explosive, we have only left for notice the Pole torpedo. As regards this

weapon, I can only remark that it has had its day, and may still on occasions be utilised. I have heard American officers — who may be called the pluckiest and most go-ahead in the world—in speaking of this weapon (which is simply a box of explosive substance at the end of a long pole projecting from the bow of a boat, with which pole you poke your enemy in the ribs, as it were), propose that it be used as a weapon of offence in a naval engagement. I, for one, never expect in these days that two ships in naval combat can lie alongside of each other long enough to allow of one of them giving the other a poke in the ribs. I believe some of my American friends perfectly capable of jumping overboard, following the sinking enemy down below, and poking the Pole torpedo into the top of his funnel or any other disappearing point. The only thing that might prevent that being done, would be that his own ship was also sinking about the same time. We heard the other day of Mr

B—— going alongside of an English man-of-war in New York, and making fast what was virtually a pole-torpedo to her sides. Well, of course if such a thing is *allowed to be done*, I have nothing more to say in the matter; all I would remark is, that some one ought to have been shot.

So much for offensive sea-going torpedoes. Not quite, however,—for while I am writing, I am reminded that there is a new and wonderful torpedo invented by a Mr Brenan, an American gentleman. I am told that it is a very remarkable invention; but they say that it is for firing from forts only, as the machinery is too heavy to carry about. I fancy it must be something good, as the English Government have taken it up.

Now I will make a few remarks on what will prove to be the real use of the marine explosive inventions of the present day. I think they will be, for defensive purposes, invaluable; and a present great statesman, whose words, "Hands

off!" are now a matter of history, might repeat to any one who threatens to bully this country —"Hands off! I am defended by torpedo-mines." I am convinced that every available landing-point on any part of the coast of Great Britain may be defended by torpedo-mines—that Portsmouth, Plymouth, the Thames, the Clyde, the Mersey, the Humber, could be made as safe from attack and invasion as they were in the days of sailing-ships. How well America knows the value of torpedo defences! How quietly she looks on, while all the world are arming to the teeth! *She*, too, says, "Hands off! beware the torpedo-mines on my coast!" She builds no big ships, she makes apparently no preparations for a row, *but she is ready*. If you ask the Americans what sort of torpedo they propose to use for their coast defence, they will give no answer; but go to New York, go to the principal sea-ports in America, and you will soon know how little she need fear any enemy, because she is in reality armed to the teeth with

every sort of invention of torpedo for defence. Not a lot of somewhat flimsily-built torpedo-boats of doubtful efficacy, but submarine projectiles and great torpedo-mines, perhaps many of them already in their places for defence—harmless in time of peace, but prepared at a moment's notice for war. So she can well say, "Better let *me* alone, I guess."

I have visited to-day the really wonderful establishment of Messrs Latimer, Clarke, & Co. There I saw every sort of invention in torpedo-mines for coast defence. What astonished me was their simplicity, their cheapness, and so far as I could judge, their efficacy. The principal thing that struck me was the system they propose to adopt for laying down their ground-mines. I am not at liberty to describe what I saw, but it was enough to convince me that, with a little foresight, a little organisation, and a really small expenditure, the entire coast of this empire, colonies and all, could be put into perfect safety as

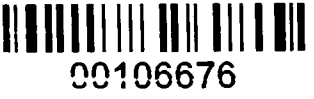
regards foreign attack or invasion. Simplicity, safety from accident, tremendous powers of local offence and defence, were clearly demonstrated in what I saw at these interesting works. I hope that more influential persons than myself will take the trouble of informing themselves how easily England may place herself and her colonies in a position of safety.

As to the torpedo-boat scare, it will in time find its level. Of course I am aware that England cannot afford to be behind-hand in show of strength as a great Naval Power, and that while other nations build huge expensive ironclads and numberless torpedo-boats, she must do the same; but let her not neglect the absolute necessity of turning to account the talents and inventions of the day, while she apparently keeps on a par with the other Powers. Thus profiting by modern progress, England might be made the most invulnerable nation in the world. We have money in the bank galore; we have water all round us, thank goodness: and so we need

not fear a combination of all the world against us, if we are only *wise in time.*

It must not be imagined that I forget that our trade requires a larger fleet as a protection than other nations; but I have been all through writing on the subject of torpedoes, and do not wish to be misunderstood in regard to my object, which has been to show that we are not quite on the right track as regards that weapon.

PRINTED BY WILLIAM BLACKWOOD AND SONS.



Digitized with financial assistance from
Shri Brihad Bhartiya Samaj
on 31 October, 2019